State of California California Technology Agency Information Technology Project Oversight Framework

SIMM Section 45

Revised April 2011

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Section

Section 1: Introduction and Overview

Government Code 11545 assigns responsibility for information technology (IT) project oversight policy to the California Technology Agency (Technology Agency). The Technology Agency's objectives for information technology (IT) oversight are:

- Implement an effective system of independent graduated oversight for all IT projects.
- Establish statewide standards for project management and oversight.
- Assess current department/Agency IT project management and oversight practices.

Key Concepts

The framework applies to all reportable IT projects as defined in the State Administrative Manual (SAM), Section 4800.

The framework primarily addresses Independent Project Oversight of project management practices. Independent Verification and Validation (IV&V) is defined here; however, IEEE Standard 1012 is the industry standard IV&V. The Technology Agency recommends that the IEEE Standard 1012 be used to guide the IV&V activities; as such, IV&V practices are not addressed in this Framework.

Definition of Project Oversight

Project oversight is defined as "an *independent* review and analysis to determine if the project is on track to be completed within the estimated schedule and cost, and will provide the functionality required by the sponsoring business entity. Project oversight identifies and quantifies any issues and risks affecting these project components." The framework described in this document emphasizes the independent nature of project oversight, along with the requirements for risk identification and mitigation.

Definition of Verification and Validation

- Verification: The process of evaluating software to determine whether the products of a given development phase satisfy the conditions imposed at the start of that phase. [IEEE-STD-610].
- Validation: The process of evaluating software during or at the end of the development process to determine whether it satisfies specified requirements. [IEEE-STD-610]

Graduated Oversight

Departments must implement independent oversight for all reportable projects. Critical projects must receive additional oversight from the appropriate Agency (or the Technology Agency, for departments operating outside Agencies) and the most critical projects will receive additional oversight from the Technology Agency. This document describes the criteria the Technology Agency will use to identify the level of criticality and oversight for IT projects.

Project Management Practices and Processes

The Technology Agency will assess department/Agency project management practices and processes as demonstrated on current projects. The framework described in this document outlines the *minimum* practices and processes that must be in effect to support successful IT projects. These practices and processes will form the basis for the Technology Agency to perform its assessments.

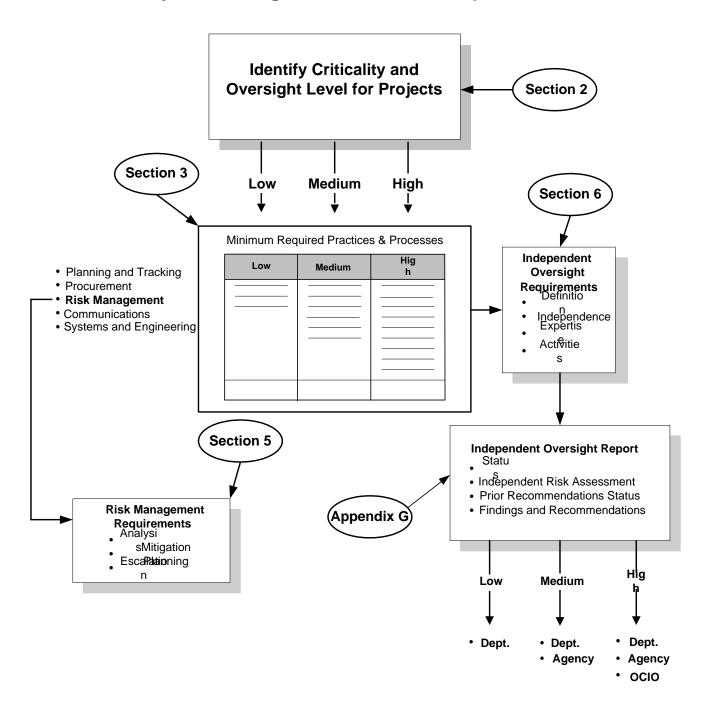
Components of the Framework

The framework for graduated project oversight will be used to assess the risk, sensitivity and/or criticality of IT projects. This assessment will place each individual project into one of three categories (low, medium, or high). All projects will receive department level oversight, critical (medium) projects will receive additional oversight from the appropriate Agency (or the Technology Agency for departments operating outside Agencies) and the most critical (high) projects will receive additional oversight from the Technology Agency. The Technology Agency will establish statewide standards for project management and oversight, and initial criteria for assessing department/Agency project management and oversight practices. The Technology Agency will also evaluate the demonstrated degree to which the departments/Agencies have established project management and internal project oversight practices and processes. **Section 3** of this document describes a *minimum required* set of practices and products that will form the basis for assessing and evaluating department/Agency performance in both project management and project oversight. The required set of practices and products is tailored to the three categories of project criticality. **Section 4** defines the IT structure and environment components used to assess department/Agency project management practices.

The Technology Agency has placed a significant emphasis on risk management as a critical function within the oversight framework. The framework directs that project oversight entities identify and quantify any issues and risks, and that appropriate notification of project risks to the Agency level (from departments) and to the Technology Agency (from Agencies) is an essential part of effective oversight. Furthermore, project managers are expected to establish appropriate remediation plans for the identified project risks. **Section 5** of this document contains the *minimum* requirements for risk management, to be implemented on *all* IT projects.

As noted above, the Technology Agency will establish statewide standards for project management and *oversight*, and initial criteria for assessing department/Agency project management and *oversight* practices. The Technology Agency will evaluate the demonstrated degree to which the departments/Agencies have established project management and internal project *oversight* practices and processes. **Section 6** of this document contains the *minimum* requirements for project oversight, to be implemented on *all* IT projects. The oversight requirements emphasize risk identification and reporting, along with the need for independent review of the performance of the activities required by the *minimum* set of practices and products described in Section 3.

Project Oversight Framework Components



Implementation of the Framework

The flow diagrams on the following two pages illustrate the major entities and flows of information involved in implementing the oversight framework described in this document. Figure 1.2 highlights the roles of departments, Agencies and independent oversight, showing the flow of oversight reporting and risk escalation. Figure 1.3 highlights the role of the Technology Agency in administering the oversight framework, assessing department/Agency capabilities and individual project criticality, and providing additional oversight to the State's most critical IT projects.

Forms and Templates

The appendices to this report contain the templates briefly described below. The Section of this document where each template is referenced is shown in parenthesis.

Appendix A – Project Management Practices and Processes (Sections 3 and 6). This information has been replaced by the California Project Management Methodology (CA-PMM). Please see SIMM Section 17.

Appendix B – Project Management Capability Assessment Checklists (Section 3). Transforms the practices and processes described in the CA-PMM into questionnaire/checklist format for use in independent project oversight in assessing department/Agency project management practices.

Appendix C – Categories and Examples of IT Project Risk (Section 5). Provides information useful to independent project oversight in reviewing the Risk Management practices of the IT project team.

Appendix D – Project Risk List (Section 5). This Appendix is replaced by the Risk Management Plan in the CA-PMM.

Appendix E – Risk Management Form (Section 5). Provides an optional template for departments for recording individual risk analysis information.

Appendix F – Project Oversight Checklists (Section 6). Transforms the practices and processes described in Appendix A into a questionnaire/checklist format for use in independent oversight reviews of individual projects.

Appendix G – Independent Project Oversight Report (Section 6). Provides a template for the written project oversight report format to be submitted by independent oversight providers to departments, Agencies and the Technology Agency.

Appendix H – Definition of Terms.

Figure 1.2 - Department/Agency/Independent Oversight

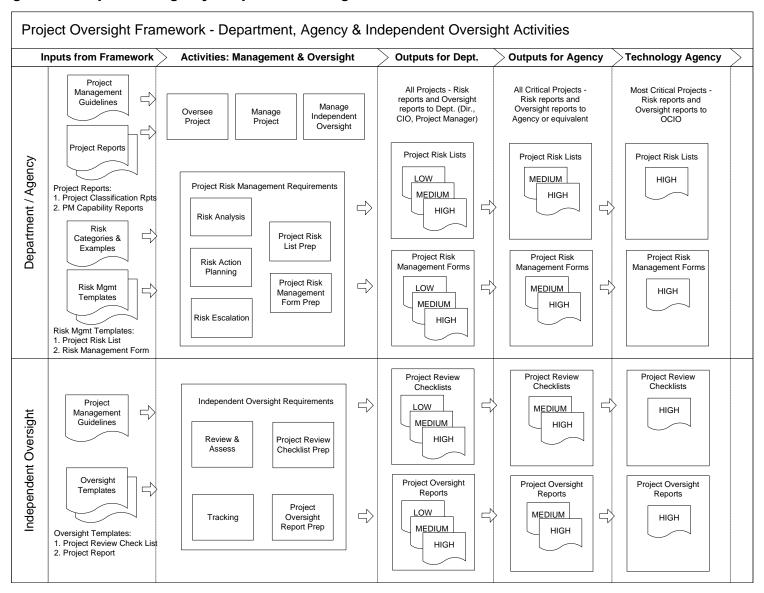
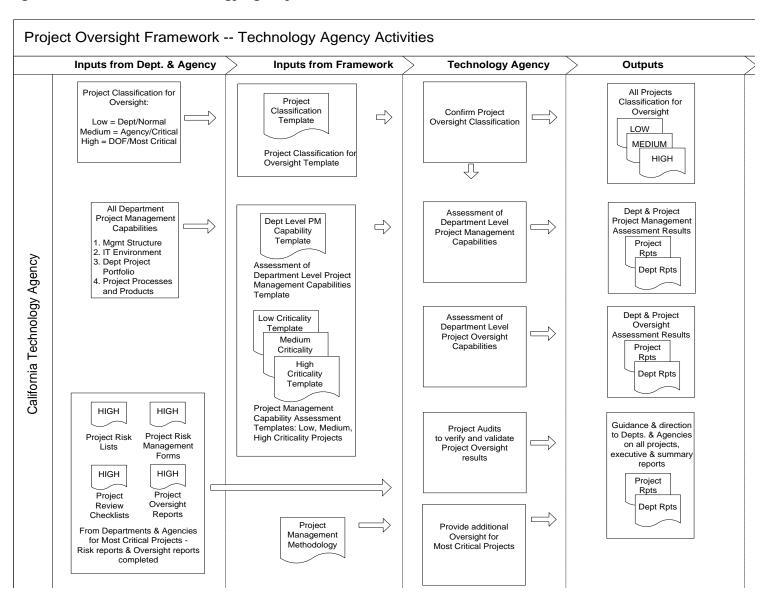


Figure 1.3 - Role of the Technology Agency



Section

Section 2: Project Classification for Oversight

The Complexity Assessment from the California Project Management Methodology (CA-PMM) Reference Manual (SIMM Section 17A) and Toolkit (SIMM Section 17D) is used to determine the level of project oversight needed on a given project, as well as providing guidelines to the qualifications for the Project Manager. Please refer to SIMM Section 17 for additional information.

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Section 3: Department Project Management Requirements

The State of California has adopted the California Project Management Methodology (CA-PMM) as the minimum requirements for IT project management for state agencies required to comply with SAM Section 4800 policies. See SAM Section 4810 and SIMM Section 17 for CA-PMM requirements.

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Section

Section 4: Project Management Practices Assessment

The following pages present the steps for independent project oversight to follow when rating departmental project management capabilities as high, medium, or low. The components of the assessment are based upon two factors, 1) the department's IT management structure and environment and 2) the degree to which the required framework and CA-PMM components are effectively used on department IT projects.

IT Management Structure and Environment Assessment Criteria

Assess the following six components for the department:

Executive level visibility and control of the IT function		
The Department has a position responsible for all Department IT projects (e.g. CIO) that reports to the Director or a Deputy Director.	High	
The individual responsible for all Department IT projects has either (1) responsibility for non-IT as well as IT functions or (2) does not report to the Director or a Deputy Director.	Medium	
There is no single individual responsible for all Department IT projects.	Low	
Centralization of PM support and related functions		
The Department has a unit that is independent of any individual project that provides project management office (PMO) type support for all department projects and	High	
project managers.	_	

PMO-type organization; or the department's PMO-type organization does not support all department projects.	
The Department possesses neither of the above.	Low

Training and Qualification of Project Managers			
The Department formally supports/ sponsors formal training for IT project managers and staff participate in training and, as appropriate, have become formally certified/qualified.	High		
While there is no formal Department support/sponsorship for formal training for IT project managers, Department staff participate in formal training and, as appropriate, have become formally certified/qualified.	Medium		
Department staff do not participate in formal project management training/certification/qualification programs.	Low		
Use of a Formal Project Management Methodology			
The Department uses (and/or requires contractors to use) the CA-PMM for all project management functions on all projects.	High		
The Department uses (and/or requires contractors to use) specific formal standards for project management functions on projects or uses multiple formal methodologies.	Medium		
The Department does not always use, nor does it require contractors to always use, a formal project management methodology.	Low		
Use of a Formal System Development Methodology			
The Department uses (and/or requires contractors to use) a single formal system development life cycle methodology on all IT projects.	High		
The Department uses (and/or requires contractors to use) multiple formal system development methodologies with each project	Medium		

adhering to one.	
The Department does not always use, nor does it require contractors to always use, a formal system development life cycle methodology.	Low

Enterprise Architecture Strategy		
The Department has a comprehensive enterprise hardware/software architecture strategy and uses the strategy to guide project level architecture decisions.	High	
The Department lacks a comprehensive enterprise architecture strategy, but technical architecture standards and guidelines are generally understood and followed on individual projects.	Medium	
The Department lacks any enterprise architecture strategy, or generally does not follow any enterprise hardware/software standards.	Low	

Computation of the IT Management Structure and Environment Rating

Step 1: Enter the individual factor rankings in column (b), lines 1 through 6, in Table 4.1 below and determine the total for column (b). Use 3 for high, 2 for medium, and 1 for low.

Table 4.1: Compute IT Management Structure and Environment Score

(a)	Factor	(b) Rating
1	Executive Level Visibility and Control	
2	Centralization of PM Support	
3	Training and Certification of Project Managers	
4	Project Management Methodology	
5	System Management Methodology	
6	Enterprise Architecture Strategy	
	Total	

Step 2: Compute the score by dividing the total from column (b) by six.

Step 3: Assign the IT Management Structure and Environment ranking by selecting high, medium, or low from Table 4.2 below, using the value determined in Step 2 above.

Table 4.2: Assign IT Management Structure and Environment Rating

Possible Results	Recommended Project Rating
2.51 – 3.0	High
1.71 – 2.5	Medium
1.0 – 1.7	Low

Project Management Practices and Processes Assessment

Independent project oversight will assess the degree to which the IT project has established and used the required project management practices documented in the CA-PMM. Independent project oversight will review the project to establish an overall project management capability Independent project oversight will interview the appropriate department IT management and staff, review project documents, and observe the project team and project activities to determine the degree to which the requirements are being met. A sample project management assessment form, based on the framework requirements, is included as Appendix B. The form will be used to determine if the required project management activities have been effectively performed on all, some or none of the project.

The Independent project oversight is required to complete the summary Project Management Assessment Form, Appendix B. Assign points to each answer, three points for *All*, one point for *Some* and zero points for *None*. (Note: The Project Management Assessment Form can also be used by Project Managers, Oversight Teams, Project Sponsors, and other interested parties for self-evaluation or oversight purposes.)

After completing the applicable questionnaires, based on project criticality level, compute the total number of points for each and assign a ranking for each type of project in accordance with Table 4.3. A department may have up to three assigned rankings; one for each level of project criticality.

Table 4.3: Project Practices and Processes Assessment Rating

Questionnaire Completed	Assign a ranking of High for	Assign a ranking of Medium for	Assign a ranking of Low for
High criticality projects	Greater than 121	88-121	Less than 88
Medium criticality projects	Greater than 91	66-91	Less than 66
Low criticality projects	Greater than 53	39-53	Less than 39

Assignment of Overall Project Rating

The overall assessment rating for a project is expressed in terms of the two components: (1) IT management structure and environment and (2) implementation of the required project management practices and processes. Therefore, a project will have between two and four ratings, a single rating for IT management structure and environment and one rating for the type (level of criticality) of the project.

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Section 5: Risk Management and Escalation Procedures

All projects should formally review risks at least monthly. Risks should be reviewed by a group of individuals representing all components of the project organization, to ensure identification of all risks.

Please see SIMM Section 17A, CA-PMM Reference Manual, Section 3.1.6, for the minimum CA-PMM Risk Management Plan requirements.

See Appendix C for categories and examples of risk in addition to that which is included in the CA-PMM.

See Appendix E for a sample Risk Management Form. This is provided as an optional tool, in addition to the CA-PMM, for documenting risk analysis, planning, tracking, and resolution.

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Section 6: Independent Oversight Requirements

This Section presents the minimum requirements for independent oversight of all reportable projects. Each department is responsible for providing independent oversight of all reportable projects within the department. Agencies must provide additional oversight for all projects within the agency that are assigned a medium or high level of criticality/risk. The Technology Agency will provide additional oversight for all projects assigned a high level of criticality/risk.

Essential Attributes of an Oversight Team

An oversight team must possess two essential attributes: independence and expertise.

Independent Oversight

The approach to meeting the independence requirement is recommended by the department during the feasibility study process based upon the Complexity Assessment. For projects reportable to the Technology Agency, the Technology Agency will provide direction to the department as to how project oversight, including Independent Verification and Validation, will be conducted based upon its review of the Complexity Assessment, and the decision will be communicated to the department prior to project approval and included in the project approval letter.

For projects which are not reportable to the Technology Agency, the department will assign internal, independent resources to perform the project oversight functions.

Expertise

The members of the oversight team must have experience as participants in and reviewers of similar projects. The team must possess subject matter expertise in project management, procurement (if applicable), risk management, communications and system engineering. This experience shall have been gained on multiple, similar projects. Teams providing oversight for medium and high-level projects must be formally trained in industry standard system development methodologies and the CA-PMM, as well as meet the requirements of the California Qualified program (see SIMM Section 17E).

Independent Oversight Activities

The independent oversight process consists of three main components:

Review and assessment

Reporting

Tracking

The oversight team shall conduct reviews for compliance with the Technology Agency CA-PMM for projects approved on or after January 1, 2009, or other industry standard project management practices for projects approved prior to January 1, 2009. Templates that may be used in completing the review and assessment are included as Appendix F. There is a separate template for each level of project criticality (low, medium and high).

For each item on the template, the oversight team shall identify the document(s) or other project products that demonstrate performance of the required functions. The team must review and assess the identified items for completeness, currency, comprehensiveness, accuracy and any other attributes pertaining to their quality and appropriateness for their intended function. The template should be employed as a checklist, with the team noting the result of the assessment and the principle sources of input to the assessment process. For any item found to be deficient, the deficiency must be documented separately as a finding within the oversight team's written report. Agencies may require additional oversight reporting, beyond that required by this framework. The documentation of additional information beyond that included in Appendix G may be added as a supplemental document to the standard reporting format.

Reporting

The independent oversight team shall compile and report its results in writing, following the format of the Project Oversight Report included as Appendix G. In addition to reporting on compliance with the appropriate project management practices, the team shall report on any other material findings, conclusions and recommendations made as a result of the review and assessment. Such findings could include, for example, identification of risks, issues, lessons learned, best practices or performance exceeding minimum requirements.

The oversight team shall provide its reports to management regularly at a frequency depending upon project criticality. Reporting requirements are shown in Table 6.1 on the next page.

Table 6.1: Destination and Frequency of Independent Project Oversight Reports

	Project Criticality				
	Low	Medium	High		
Oversight report to:	Department	Department/Agency	Department/Agency/Technology Agency		
Reporting at least:	Quarterly	Quarterly	Monthly		

Tracking

Independent project oversight is a process that begins immediately following project approval and continues through project closeout. The deficiencies, issues, findings and recommendations identified by the oversight process must be incorporated into the appropriate project management processes (e.g. planning and tracking, risk management, etc.). As the project progresses, the review and assessment process must also track the disposition of the team's prior findings, recommendations and identified deficiencies. Oversight reporting must include follow-up information on the project's corrective action and implementation of oversight recommendations

Appendix A: Required Project Management Practices and Products

This Appendix has been replaced by the CA-PMM. Project management requirements as described in the CA-PMM are to be considered on all IT projects; however, the response to some questions or items within the CA-PMM on minor or small projects may often be "not applicable" or not significant enough to warrant the attention of the Project Manager. On larger projects, all questions or items must be considered.

Please see SAM Section 17 for additional information.

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Appendix B: Department Project Management Assessment Form

Independent project oversight will use the following form to assess the practices and processes of project management capabilities. (Following is for a low criticality project).

Project Management Capability Assessment: Low Criticality Projects

Activity	All	Some	None
Planning and Tracking		•	
Are business cases, project goals, objectives, expected outcomes, key stakeholders and sponsor(s) identified and documented?			
Are project work plans including identification of activities, deliverables, milestones and schedule prepared and maintained?			
Are project organization charts prepared and kept current?			
Are project cost estimates, with supporting data for each cost category, maintained?			
Are actual costs, recorded for each cost category, recorded as they are incurred?			
Are actual costs regularly compared to budgeted costs?			
Is supporting data maintained for actual costs?			
Is completion status of work plan activities, deliverables, and milestones recorded, compared to schedule and included in a written status reporting process?			
Is there formal change control/approval for key specification documents (e.g. contracts, requirement specifications and other contract deliverables) and software products?			
Are issues and problems identified and tracked to closure?			
Is user satisfaction assessed at key points in the project?			
Are project closeout activities performed, including completion of a PIER, collection and archiving up-to-date project records and identification of lessons learned?			
Procurement			
Are appropriate procurement vehicles selected (e.g. CMAS, MSA,			

Activity	AII	Some	None
"alternative procurement") and their required processes followed?			
Is a detailed written contractor scope of work included in solicitation documents?			
Risk Management			•
Are risks identified, analyzed, mitigated and escalated in accordance with Technology Agency requirements?			
Communications			
Are regular written status reports prepared and provided to key stakeholders?			
Do status reports include progress against timeline and budget?			
Do status reports include results and status on risk and issue management?			
System Engineering			
Do users formally approve/sign-off on written specifications?			
Do users sign-off on acceptance test results before a new system is put into production?			

Independent project oversight will use the following form to assess the practices and processes of project management capabilities. (Following is for a medium criticality project).

Project Management Capability Assessment: Medium Criticality Projects

Activity	All	Some	None
Planning and Tracking			
Are business cases, project goals, objectives, expected outcomes, key stakeholders and sponsor(s) identified and documented?			
Are detailed project plans with all activities (tasks), milestones, dates and estimated hours by task loaded to project management software? Are the lowest level tasks of a short duration with measurable outcomes?			
Is the completion of planned tasks recorded within the CA-PMM Toolkit or other identified software?			
Are actual hours expended by task recorded at least monthly within the CA-PMM Toolkit or other identified software?			
Are estimated hours to complete by task recorded at least monthly the CA-PMM Toolkit or other identified software?			
Is a project organization chart prepared and kept current?			
Are project cost estimates, with supporting data for each cost category, being maintained?			
Are software size estimates developed and tracked?			
Are at least two software size estimation approaches used?			
Are actual costs recorded as they are incurred for each cost category?			
Are actual costs regularly compared to budgeted costs?			
Is supporting data maintained for actual costs?			
Is completion status of work plan activities, deliverables, and milestones recorded, compared to schedule and included in a written status reporting process?			
Are change control/approval procedures in place for key specification documents (e.g. contracts, requirement specifications and other contract deliverables) and software products?			
Are issues/problems and their resolution (including assignment of specific staff responsibility for issue resolution and specific deadlines for			

Activity	All	Some	None
completion of resolution activities), formally tracked?			
Is user satisfaction assessed at key project milestones?			
Are project closeout activities performed, including completion of a PIER, collection and archiving up-to-date project records and identification of lessons learned?			
Procurement			
Are appropriate procurement vehicles selected (e.g. CMAS, MSA, "alternative procurement") and their required processes followed?			
Is a detailed written scope of work for all services included in solicitation documents?			
Are detailed requirement specifications included in solicitation documents?			
Risk Management			
Are risks identified, analyzed, mitigated and escalated in accordance with Technology Agency requirements?			
Communication			
Is there a written project communications plan?			
Are regular written status reports prepared and provided to the project manager, department CIO (if applicable) and other key stakeholders?			
Are there written escalation policies for issues and risks?			
Is there regular stakeholder involvement in major project decisions, issue resolution and risk mitigation?			
System Engineering			-
Are users involved throughout the project, especially in requirements specification and testing?			
Do users formally approve/sign-off on written specifications?			
Is a formal system development life cycle (SDLC) methodology followed?			
Are functional and performance requirements traceable through the life cycle phases?			

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Activity	All	Some	None
Are software engineering standards adhered to?			
Does software defect tracking begin no later than unit testing?			
Are there formal code reviews?			
Are formal quality assurance procedures followed consistently through all life cycle phases?			
Do users sign-off on acceptance test results before a new system is put into production?			

Independent project oversight will use the following form to assess the practices and processes of project management capabilities. (Following is for a high criticality project).

Project Management Capability Assessment: High Criticality Projects

Activity	All	Some	None
Planning and Tracking			
Are business cases, project goals, objectives, expected outcomes, key stakeholders and sponsor(s) identified and documented?			
Are detailed project plans with all activities (tasks), milestones, dates and estimated hours by task loaded into the CA-PMM Toolkit or other identified software? Are the lowest level tasks of a short duration with measurable outcomes?			
Is completion of planned tasks recorded within the CA-PMM Toolkit, Microsoft Project, or other identified software?			
Are actual hours expended by task recorded at least monthly within the CA-PMM Toolkit or other identified software?			
Are estimated hours to complete by task recorded at least monthly within the CA-PMM Toolkit or other identified software?			
Is a project organization chart prepared and kept current?			
Are there procedures for formal staff planning, including written roles and responsibilities, plans for staff acquisition, schedule for arrival and departure of specific staff, and staff training plans			
Have project cost estimates, with supporting data for each cost category, been maintained?			
Are software size estimates developed and tracked?			
Are at least two software size estimation approaches used?			
Are independent reviews of estimates conducted?			
Are actual costs for each cost category recorded as they are incurred?			
Are actual costs regularly compared to budgeted costs?			
Is supporting data maintained for actual costs?			
Is completion status of work plan activities, deliverables, and milestones recorded, compared to schedule and included in a written status reporting process?			

Activity	All	Some	None
Is formal configuration control practiced, including a written configuration management plan covering change control/approval for key specification documents (e.g. contracts, requirement specifications and/or contract deliverables) and software products and specific staff roles and responsibilities for configuration management?			
Are issues/problems and their resolution (including assignment of specific staff responsibility for issue resolution and specific deadlines for completion of resolution activities), formally tracked?			
Is user satisfaction assessed at key project milestones?			
Is planning in compliance with formal standards or a system development life cycle (SDLC) methodology?			
Is there formal enterprise architecture planning?			
Are project closeout activities performed, including completion of a PIER, collection and archiving up-to-date project records and identification of lessons learned?			
Procurement			
Are appropriate procurement vehicles selected (e.g. CMAS, MSA, "alternative procurement") and their required processes followed?			
Is a detailed written scope of work for all services included in solicitation documents?			
Are detailed requirement specifications included in solicitation documents?			
Is there material participation of outside expertise (e.g. DGS, Departmental specialists, consultants) in procurement planning and execution?			
For large-scale outsourcing, is qualified legal counsel obtained?			
Risk Management			
Is formal continuous risk management performed, including development of a written risk management plan, identification, analysis, mitigation and escalation of risks in accordance with the CA-PMM and regular management team review of risks and mitigation progress performed?			
Does the management team review risks and mitigation progress at least monthly?			

Activity	All	Some	None
Are externally developed risk identification aids used, such as the SEI "Taxonomy Based Questionnaire?"			
Communication			
Is there a written project communications plan?			
Are regular written status reports prepared and provided to the project manager, department CIO (if applicable) and other key stakeholders?			
Are there written escalation policies for issues and risks?			
Is there regular stakeholder involvement in major project decisions, issue resolution and risk mitigation?			
System Engineering			-
Are users involved throughout the project, especially in requirements specification and testing?			
Do users formally approve/sign-off on written specifications?			
Is a formal system development life cycle (SDLC) methodology followed?			
Is a software product used to assist in managing requirements? Is there tracking of requirements traceability through all life-cycle phases?			
Are software engineering standards adhered to?			
Does software defect tracking begin no later than requirements specifications?			
Are there formal code reviews?			
Are formal quality assurance procedures followed consistently through all life-cycle phases?			
Do users sign-off on acceptance test results before a new system is put into production?			
Is the enterprise architecture plan adhered to?			
Are formal deliverable inspections performed, beginning with requirements specifications?			
Are IV&V services used?			

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Appendix C: Categories and Examples of Risk

Plan/Schedule

Schedule is optimistic, "best case," rather than realistic, "expected case"

Plan omits necessary tasks

Schedule was based on the use of specific team members, but those team members were not available

Cannot build a product of the size specified in the time allocated

Product is larger than estimated (in lines of code, function points, or percentage of previous project's size)

Effort is greater than estimated (per line of code, function point, module, etc.)

Re-estimation in response to schedule slips does not occur, or is overly optimistic or ignores project history

Excessive schedule pressure

A delay in one task causes cascading delays in dependent tasks

Unfamiliar or complex areas of the product take more time than expected to design and implement

Organization and Management

Project lacks an effective top-management sponsor

Layoffs and cutbacks reduce team's capacity

Inefficient team structure reduces productivity

Lack of specific technical expertise

Management review/decision cycle is slower than expected

Budget cuts

Non-technical third-party tasks take longer than expected (control agency approvals, procurement, equipment purchase, legal reviews, etc.)

Project plans are abandoned under pressure

Inaccurate status reporting

Development Environment

Facilities are not available on time

Facilities are available but inadequate (e.g., no phones, network wiring, furniture, office supplies, etc.)

Facilities are crowded, noisy, or disruptive

Development tools are not in place by the desired time

Development tools do not work as expected; developers need time to create workarounds or to switch to new tools

Developers unfamiliar with development tools

Development tools do not provide the planned productivity

Development environment structure, policies, procedures are not clearly defined

User Involvement

User introduces new requirements after agreed upon requirements specification is complete User finds product to be unsatisfactory

User does not buy into the project and consequently does not provide needed support

User input is not successfully solicited

User review/decision cycles for plans, prototypes, and specifications are slower than expected

User will not participate in review cycles for plans, prototypes, and specifications or is incapable of doing so

User communication time (e.g., time to answer requirements-clarification questions) is slower than expected

User-mandated support tools and environments are incompatible, have poor performance, or have inadequate functionality

User has expectations for development speed that developers cannot meet

Contractor Performance

Contractor does not deliver components when promised

Contractor delivers components of unacceptably low quality, and time must be added to improve quality

Contractor does not provide the level of domain expertise needed

Contractor does not provide the level of technical expertise needed

Requirements Management

Requirements have been base lined but continue to change

Requirements are poorly defined, and further definition expands the scope of the project

Additional requirements are added

Vaguely specified areas of the product are more time-consuming than expected

Product Characteristics

Error-prone modules require more testing, design, and implementation work than expected

Unacceptably low quality requires more testing, design, and implementation work to correct than expected

Development of flawed software functions requires redesign and implementation

Development of flawed user interface results in redesign and implementation

Development of extra software functions that are not required extends the schedule

Meeting product's size or speed constraints requires more time than expected, including time for redesign and re-implementation

Requirements for interfacing with other systems, other complex systems, or other systems that are not under the team's control result in unforeseen design, implementation, and testing

Requirement to operate under multiple operating systems takes longer to satisfy than expected

Development in an unfamiliar or unproved software environment

Development in an unfamiliar or unproved hardware environment

Dependency on a technology that is new or still under development

External Environment

Product depends on law, policy or regulations that change frequently

Multiple stakeholders outside the normal department chain of command

Key software or hardware components become unavailable, unsupported or are unexpectedly scheduled for de-support

Personnel

Acquisition of required project staff takes longer than expected

Task prerequisites (e.g., training, completion of other projects) cannot be completed on time

Poor relationships between project team and users or other stakeholders slow decision making and follow through

Lack of needed specialization (includes technical and domain knowledge) increases defects and rework

Personnel need extra time to learn unfamiliar software tools or environment

Personnel need extra time to learn unfamiliar hardware environment

Personnel need extra time to learn unfamiliar software language

Unplanned turnover of contractor key personnel

Unplanned turnover of State key personnel

New development personnel are added late in the project, and additional training and communications overhead reduces existing team members' effectiveness

Conflicts between team members

Problem team members are not removed from the team

The personnel most qualified to work on the project are not available or are not used

Personnel with critical skills needed for the project cannot be found

Key personnel are available only part time

Not enough personnel are available for the project

People's assignments do not match their strengths

Design and Implementation

Design fails to address major issues

Design requires unnecessary and unproductive implementation overhead

Flawed design

Use of unfamiliar methodology

Necessary functionality cannot be implemented using the selected methods and tools

Schedule savings from productivity enhancing tools are overestimated

Components developed separately cannot be integrated easily

Data conversion activities are underestimated or are ignored

Process

Inaccurate progress tracking

Upstream quality-assurance activities are limited or cut short

Poor quality assurance

Too little formality (lack of adherence to software policies and standards)

Too much formality (bureaucratic adherence to software policies and standards)

Weak risk management fails to detect major project risks

Project management and tracking consumes more resources than expected

Appendix D: Project Risk List

The CA-PMM has replaced this section of the Oversight Framework. Please see SIMM Sections 17A and 17C, Risk Management Plan.

	Information	Technology	Project	Oversight	Framework
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Appendix E: Risk Management Form

This form is a template for optional use for the project team in documenting the analysis of each project risk identified. Independent project oversight should review the analysis documentation process for each identified risk and determine if these minimum requirements are met.

Risk Management Form					
Probability:	Project:				
Impact:	Risk Title:				
Time Frame:	Originator:	Origination Date:			
Severity:	Assigned to:	Report Date:			
Risk Assessment					
Risk Statement:					
Risk Context/Analysis:					
Risk Planning					
Strategy:Research	Action Items				
Accept					
Mitigate Watch					
Risk Tracking					
Event/Action/Commitme	ent:				

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Risk Resolution		
Sign-off:	Sign-off:	Sign-off:
Sign-off Date:	Sign-off Date:	Sign-off Date:

Appendix F: Project Oversight Review Checklist

Project Oversight Review Checklist: Low Criticality Project

Practices and Products	Adequate	Deficient	Notes: Items Reviewed; Interviews Conducted; Demonstration			
Planning and Tracking	Planning and Tracking					
Have the business case, project goals, objectives, expected outcomes, key stakeholders and sponsor(s) been identified and documented?						
Has a detailed project work plan including specification of activities, deliverables, milestones and schedule been prepared?						
Is there a current project organization chart?						
Are project cost estimates, with supporting data for each cost category, maintained?						
Are actual costs recorded for each cost category recorded as they are incurred?						
Are actual costs regularly compared to budgeted costs?						
Is supporting data maintained for actual costs?						
Is completion status of work plan activities, deliverables, and milestones recorded, compared to schedule and included in a written status reporting process?						
Are change control/approval procedures in place for key specification documents (e.g. contracts, requirement						

Practices and Products	Adequate	Deficient	Notes: Items Reviewed; Interviews Conducted; Demonstration		
specifications and other contract deliverables) and software products?					
Are issues/problems and their status and resolution tracked from identification to resolution?					
Is user satisfaction assessed at key project milestones?					
Are project closeout activities performed, including completion of a PIER, collection and archiving up-to-date project records and identification of lessons learned?					
Procurement					
Has an appropriate procurement vehicle been selected (e.g. CMAS, MSA, "alternative procurement") and the required processes followed?					
Is a detailed written contractor scope of work included in the solicitation document?					
Risk Management	Risk Management				
Are the identification, analysis, mitigation and escalation of risks performed in accordance with Technology Agency Guidelines?					
Communication					
Is project status reported regularly to key stakeholders, including progress against timeline and budget, risk management results and status, issue management results and status?					

Practices and Products	Adequate	Deficient	Notes: Items Reviewed; Interviews Conducted; Demonstration
System Engineering			
Do users formally approve/sign-off on written specifications?			
Is formal testing performed, including user sign-off?			

Project Oversight Review Checklist: Medium Criticality Project

Practices and Products	Adequate	Deficient	Notes: Items Reviewed; Interviews Conducted; Demonstration			
Planning & Tracking	Planning & Tracking					
Have the business case, project goals, objectives, expected outcomes, key stakeholders and sponsor(s) identified and documented?						
Has a detailed project plan with all activities (tasks), milestones, dates and estimated hours by task loaded into project management (PM) software? Are the lowest level tasks of a short duration with measurable outcomes?						
Is completion of planned tasks recorded within the PM software?						
Are actual hours expended by task recorded at least monthly within PM software?						
Are estimated hours to complete by task recorded at least monthly within PM software?						
Is there a current project organization chart?						
Have project cost estimates, with supporting data for each cost category, been maintained?						
Are software size estimates developed and tracked?						
Are two or more estimation approaches used to refine estimates?						
Are actual costs recorded and regularly compared to						

Practices and Products	Adequate	Deficient	Notes: Items Reviewed; Interviews Conducted; Demonstration
budgeted costs?			
Is supporting data maintained for actual costs?			
Is completion status of work plan activities, deliverables, and milestones recorded, compared to schedule and included in a written status reporting process?			
Are change control/approval procedures in place for key specification documents (e.g. contracts, requirement specifications and other contract deliverables) and software products?			
Are issues/problems and their resolution (including assignment of specific staff responsibility for issue resolution and specific deadlines for completion of resolution activities), formally tracked?			
Is user satisfaction assessed at key project milestones?			
Are project closeout activities performed, including a PIER, collection and archiving up-to-date project records and identification of lessons learned?			
Procurement			
Are appropriate procurement vehicles selected (e.g. CMAS, MSA, "alternative procurement") and their required processes followed?			
Is a detailed written contractor scope of work included in the solicitation document?			

Practices and Products	Adequate	Deficient	Notes: Items Reviewed; Interviews Conducted; Demonstration
Are detailed requirement specifications included in solicitation documents?			
Risk Management			
Are the identification, analysis, mitigation and escalation of risks performed in accordance with the CA-PMM?			
Communication			
Is there a written project communications plan?			
Are regular written status reports prepared and provided to the project manager, department CIO (if applicable) and other key stakeholders?			
Are there written escalation policies for issues and risks?			
Is there regular stakeholder involvement in major project decisions, issue resolution and risk mitigation?			
System Engineering			
Are users involved throughout the project, especially in requirements specification and testing?			
Do users formally approve/sign-off on written specifications?			
Is a formal system development life cycle (SDLC) methodology followed?			
Is requirements traceability tracked through all life cycle			

Practices and Products	Adequate	Notes: Items Reviewed; Interviews Conducted; Demonstration
phases?		
Do software engineering standards exist and are they followed?		
Does software defect tracking begin no later than unit testing?		
Are formal code reviews conducted?		
Are formal quality assurance procedures followed consistently?		
Do users sign-off on acceptance test results before a new system or changes are put into production?		

Project Oversight Review Checklist: High Criticality Project

Practices and Products	Adequate	Deficient	Notes: Items Reviewed; Interviews Conducted; Demonstration				
Planning and Tracking	Planning and Tracking						
Have the business case, project goals, objectives, expected outcomes, key stakeholders, and sponsor(s) identified and documented?							
Has a detailed project plan with all activities (tasks), milestones, dates, and estimated hours by task loaded into CA-PMM Toolkit or other identified software? Are the lowest level tasks of a short duration with measurable outcomes?							
Is completion of planned tasks recorded within the CA-PMM Toolkit, Microsoft Project, or other identified software?							
Are actual hours expended by task recorded at least monthly within the CA-PMM Toolkit or other identified software?							
Are estimated hours to complete by task recorded at least monthly within the CA-PMM Toolkit or other identified software??							
Is there a formal staffing plan, including a current organization chart, written roles and responsibilities, plans for staff acquisition, schedule for arrival and departure of specific staff, and staff training plans							
Have project cost estimates, with supporting data for each cost category, been maintained?							

Practices and Products	Adequate	Deficient	Notes: Items Reviewed; Interviews Conducted; Demonstration
Are software size estimates developed and tracked?			
Are two or more estimation approaches used to refine estimates?			
Are independent reviews of estimates conducted?			
Are actual costs recorded and regularly compared to budgeted costs?			
Is supporting data maintained for actual costs?			
Is completion status of work plan activities, deliverables, and milestones recorded, compared to schedule and included in a written status reporting process?			
Are key specification documents (e.g. contracts, requirement specifications and/or contract deliverables) and software products under formal configuration control, with items to be controlled and specific staff roles and responsibilities for configuration management identified in a configuration management plan?			
Are issues/problems and their resolution (including assignment of specific staff responsibility for issue resolution and specific deadlines for completion of resolution activities), formally tracked?			
Is user satisfaction assessed at key project milestones?			
Is planning in compliance with formal standards or a system development life cycle (SDLC) methodology?			

Practices and Products	Adequate	Deficient	Notes: Items Reviewed; Interviews Conducted; Demonstration
Is there a formal enterprise architecture in place?			
Are project closeout activities performed, including a PIER, collection and archiving up-to-date project records and identification of lessons learned?			
Procurement			
Are appropriate procurement vehicles selected (e.g. CMAS, MSA, "alternative procurement") and their required processes followed?			
Is a detailed written scope of work for all services included in solicitation documents?			
Are detailed requirement specifications included in solicitation documents?			
Is there material participation of outside expertise (e.g. DGS, Departmental specialists, consultants) in procurement planning and execution?			
For large-scale outsourcing, is qualified legal counsel obtained?			
Risk Management			
Is formal continuous risk management performed, including development of a written risk management plan, identification, analysis, mitigation and escalation of risks in accordance with the CA-PMM, and regular management team review of risks and mitigation progress performed?			

Practices and Products	Adequate	Deficient	Notes: Items Reviewed; Interviews Conducted; Demonstration
Does the management team review risks and mitigation progress at least monthly?			
Are externally developed risk identification aids used, such as the SEI "Taxonomy Based Questionnaire?"			
Communication			
Is there a written project communications plan?			
Are regular written status reports prepared and provided to the project manager, department CIO (if applicable) and other key stakeholders?			
Are there written escalation policies for issues and risks?			
Is there regular stakeholder involvement in major project decisions, issue resolution and risk mitigation?			
System Engineering			
Are users involved throughout the project, especially in requirements specification and testing?			
Do users formally approve/sign-off on written specifications?			
Is a formal system development life cycle (SDLC) methodology followed?			
Is a software product used to assist in managing requirements? Is the tracking of requirements traceability performed through all life cycle phases?			

Practices and Products	Adequate	Deficient	Notes: Items Reviewed; Interviews Conducted; Demonstration
Do software engineering standards exist and are they followed?			
Does product defect tracking begin no later than requirements specifications?			
Are formal code reviews conducted?			
Are formal quality assurance procedures followed consistently?			
Do users sign-off on acceptance test results before a new system or changes are put into production?			
Is the enterprise architecture plan adhered to?			
Are formal deliverable inspections performed, beginning with requirements specifications?			
Are IV&V services obtained and used?			

Appendix G: Independent Project Oversight Report

[See separate instruction sheet for guidance on any of the fields in the form]

Project Name:	Assessment Date:		
	Frequency:		
Oversight Provider Info	rmation		
Oversight Leader:	Organization:		
Phone Number:	Email:		
Project Information			
Project Number:	Department:		
Criticality:	Agency:		
Last Approved Document/Date:	Total One-time Cost:		
Start Date:	End Date:		
Project Manager:	Organization:		
Phone Number:	Email:		
Summary: Current Stat	us – If multiple current phases, use section at end to assess the status of additional phases.		
Project Phase:			
Planned Start Date:	Planned End Date:		
Actual Start Date:			
Schedule			
Select the statement that mo	ost closely applies, measured against the last Technology Agency approved document.		
	Ahead-of-schedule: One or more major tasks or milestones have been completed and approved early (> 5%). All other major tasks and milestones completed and approved according to plan. On-schedule:		
	All major tasks and milestones have been completed and approved according to plan. (Within 5%) Behind Schedule:		
Comments:	One or more major tasks or milestones are expected to be delayed. (> 5%)		

Quality (Client Functionality) Choose the statement that most closely applies.

Adequately Defined
Required client functionality is adequately defined, and is being successfully built into the system, given the current project phase.

Inadequately Defined
One or more significant components of required client functionality are inadequately defined, or are not being successfully built into the system, given the current project phase.

Comments:

Quality (Architecture/System Performance) Choose the statement that most closely applies.

Adequately Defined

The system technical architecture is adequately defined, and modeling, benchmarking and testing are being conducted (or are planned) appropriate to the current project phase.

Inadequately Defined

The system technical architecture is not adequately defined, or modeling, benchmarking and testing are not being conducted (or are planned) appropriate to the current project phase.

Comments:

Comments:

New Project Risks

List (in priority order) the most critical risks to completing the project within the approved schedule, budget and scope. See instructions for description of desired format. If more than five risks are to be included, copy and paste as needed.

Identifier:	Risk Statement:	
Probability: Related Findii	Impact:	Timeframe:
Identifier:	Risk Statement:	
Probability:	Impact:	Timeframe:
Related Findin	ngs:	
Identifier:	Risk Statement:	
Probability:	Impact:	Timeframe:
Related Findin	ngs:	
Identifier:	Risk Statement:	
Probability:	Impact:	Timeframe:
Related Findin	ngs:	
Identifier:	Risk Statement:	
Probability:	Impact:	Timeframe:
Related Findin	ngs:	

Progress Toward Addressing Prior Risks

List the risks included in the *New Project Risks* section in previous IPORs. Risks are to remain reported in this section until they are closed or no longer critical, with an explanation of the resolution. See instructions for description of desired content. If more than five risks are to be included, copy and paste as needed.

Identifier:	Risk Statement:
Status:	
Identifier:	Risk Statement:
Status:	
Identifier:	Risk Statement:
Status:	
Identifier:	Risk Statement:
Status:	
Identifier:	Risk Statement:
Status:	

ional phases Planned End Date:
Planned End Date:
Planned End Date:
applies, measured against the last Technology Agency approved document.
of-schedule: nore major tasks or milestones have been completed and approved early (> 5%). major tasks and milestones completed and approved according to plan.
edule: tasks and milestones have been completed and approved according to plan. %)
Schedule: nore major tasks or milestones are expected to be delayed. (> 5%)
se the statement that most closely applies.
esources ion of one or more major tasks and/or acceptable products has required or is to require materially (>5%) fewer hours/staff than planned.
Resources tasks have been completed and acceptable products created using the planned of hours/staff (within 5%).
esources ion of major tasks and/or acceptable products has required or is expected to require y (>5%) more hours/staff than planned.

Resources (Budget/Cost) Choose the statement that most closely applies.					
	Less cost The project is (>5%) under budget.				
	Within cost The project is operating within budget.				
	Higher cost Material budget increases (>5%) are likely.				
Comments:					
Quality (Client Functions	Quality (Client Functionality) Choose the statement that most closely applies.				
	Adequately Defined Required client functionality is adequately defined, and is being successfully built into the system, given the current project phase.				
	Inadequately Defined One or more significant components of required client functionality are inadequately defined, or are not being successfully built into the system, given the current project phase.				
Comments:					
Quality (Architecture/System Performance) Choose the statement that most closely applies.					
	Adequately Defined The system technical architecture is adequately defined, and modeling, benchmarking and testing are being conducted (or are planned) appropriate to the current project phase.				
	Inadequately Defined The system technical architecture is not adequately defined, or modeling, benchmarking and testing are not being conducted (or are planned) appropriate to the current project phase.				

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Comments:

Appendix G: Independent Project Oversight Report -- Instructions

This report must be completed by the independent oversight provider as described in the Information Technology Project Oversight Framework (<u>Framework</u>). Questions concerning any aspect of the report can be directed to the Technology Agency Manager or Principal assigned to the specific department. Assignments can be found on the Technology Agency's Web site at http://www.cio.ca.gov/Contact_Us/staff_assignments.html or by calling (916) 319-9223.

REPORT LAYOUT:

The IPOR includes the following sections:

- Oversight Provider Information
- Project Information
- Summary of Current Status
- Current Project Risks
- Progress Toward Addressing Prior Risks

Please note that the *Oversight Provider Information*, *Project Information*, and *Summary: Current Status* sections of the form are locked. If the report is unlocked prior to saving the file, re-locking the file will eliminate all previous responses in these Sections. In addition, the spelling/grammar-checking feature is not available while the file is locked.

Enter the name of the project, the month and year of the assessment (final month if a quarterly report), and indicate whether the report frequency is quarterly or monthly.

Oversight Provider Information

Oversight Leader: Person who has the primary responsibility for the oversight information and who

the Technology Agency would contact first with any questions regarding the

report.

Organization: Name of Company, State Department, or Agency conducting Project Oversight.

Phone Number: Include area code, and extension if applicable.

Project Information

Project Number: Number assigned by the Technology Agency, consisting of a four-digit State

organization code, followed by the number assigned to the project by the

Technology Agency at the time of approval. Example: 1234-023

Department: Name of State Board, Department, Office, Commission, etc. with primary

ownership of the project.

Criticality: Project criticality/risk rating for oversight purposes, (High/Medium/Low)

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Agency: If the organization listed under Department reports to a State Agency, include

the appropriate Agency. If not applicable, show "N/A"

Last Approved
Document &
Date:

List the last approved project document, for example FSR or SPR, followed by the date the document was approved by the Technology Agency. If multiple documents exist of the last approved type, include the sequence number with the type. For example, if a project has had two SPRs, the last being approved by the Technology Agency on November 25, 2002, the field would look as follows:

SPR2 - 11/25/2002

Total One-time

Cost: The total one-time cost included in the last Technology Agency approved project

document.

Start/End Dates: Enter the project start and end dates from the project schedule included in the

last Technology Agency approved project document.

Project Manager & related information:

Enter the individual with the primary responsibility for the project, whether State employee or vendor. If the project manager is a vendor, include the name of the vendor's company. If the project manager is a State employee, include the Division or Branch in which they work. Include their direct phone number

(formatted as previously mentioned) and e-mail address.

Summary: Current Status

Project Phase:

Show the current phase of the project based on the approved project plan or using the system development life-cycle project phases (for example planning, design, development, or system test). If this is a phased implementation with multiple current phases, use the section at the end of the form to include the required information for the additional current phases.

List the planned starting and ending dates for the project phase, based on the project schedule included in the Technology Agency approved project document. Enter the actual date that the phase began.

Assessments
(Schedule,
Resources-effort,
Resourcesbudget, QualityClient
Functionality,
and QualitySystem

Performance)

Using the drop down boxes, choose the assessment for each of the five areas that most closely match the current project status. The first three areas have a plus/minus five percent benchmark. The intent is to obtain the oversight provider's professional opinion of the current status, knowing that information may not be available to estimate within the five percent parameter (with a great amount of certainty).

If the current status cannot be reasonably determined for a given area, add a comment that describes the situation and the barrier. [Include a comment of "N/A" for any areas that are not applicable to the current phase.] For the Schedule area, status is measured against the timeframes in the last Technology Agency approved document. In the Resources-Budget area, consider the timing of expected expenditures, for example fixed price contracts and hardware/software purchases. The comments field may also be used to clarify why the project is not within the approved project parameters, or to explain the degree to which they differ.

New Project Risks

NOTE:

Only the newly identified, most critical risks will be shown in this section on each report. Risks included in this section on previous reports should be transferred to the *Progress Towards Addressing Prior Risks* section.

Risk Statement: List in priority order the new, most critical risks to the project. These should include project risks associated with all categories identified in the Framework, including risks associated with the lack of appropriate project management practices and tools. Please refer to Sections 5, 6, and Appendices B, C and F of the Technology Agency Framework for guidance and examples of appropriate risk statements. Each risk statement should concisely include the three following components: the <u>concern</u>, the <u>likelihood</u>, and one or more potential <u>consequence</u>. Do not limit the number of risks included in the IPOR to the five spaces shown in the template.

Identifier:

These most critical risks should be a subset of a larger list of risks actively being managed by the project. Many organizations have automated or custom tools to manage project risks which include a risk identifier system that is meaningful to the organization. The IPOR template includes a field for identifier. These should reflect the risk identification system used on the project. It may be sequential numbers or another more sophisticated identification system used by the project. Any method is adequate, as long as consistency is maintained throughout the life of the project, and identifiers are not re-used during the life of a project. Entries made in this section will move to the "Progress toward addressing prior risk/findings" section in subsequent reports. As they are moved, each risk will retain its unique identifier.

Probability, Impact, & Timeframe ratings: Rate the *Probability, Impact*, and *Timeframe* for each risk. *Probability* and *Impact* choices are High, Medium, and Low. The *Timeframe* options are Long, Medium, and Short. A methodology for determining these factors is included in Section 5 of the Technology Agency Framework.

Related Findings:

Each risk will have one or more findings to support the risk statement. The finding(s) will explain the probability, impact, and timeframe designations.

A finding should include the:

- Condition (what was found),
- Criteria (what was expected), and
- Cause (factors responsible for the difference).

A finding statement should also include the effect, or potential impact of the finding.

Progress Toward Addressing Prior Risks

All risks included in the *Current Project Risks* section on previous reports must be displayed in this section at least once. If the risk was successfully resolved between the time of inclusion in the prior section and the next report, it must still be included in this section. Risks remain reported in this section until they are closed or no longer critical, with an explanation of the resolution.

Identifier: The identifier will not change when moved to this section.

Risk Statement: The risk statement from the prior section is typically moved in its entirety to this

area. It is possible that one of the parameters changes, for example the timeframe, however the risk remains critical and therefore stays on the list.

Status: Describe the current actions taken regarding the risk or the associated findings.

This would include mitigation strategies or action plans obtained from the project.

If sufficient changes have occurred to render the risk no longer critical, for example the timeframe for the risk has passed, fully explain the change under

status, and the risk can be removed on the subsequent report.

If the project manager disagrees with the risk, as identified by the oversight

provider, this should be also noted in the status.

General Comments

Include any additional information relevant to the project from an oversight perspective beyond the detail provided in the other sections of this report. This could include additional findings (for example positive findings or findings not associated with the most critical risks) or further clarification/background material to the risks shown in the new or prior sections of the report.

Attachments:

Oversight providers will include a completed *Project Oversight Review Checklist* (Appendix F of the Framework) with the initial IPOR submitted to the Technology Agency for each project. Inclusion of the checklist with subsequent reports is optional. Generally, oversight providers are encouraged to attach any additional documents that provide detailed or supporting information, for example the current project schedule, cost sheet, or full project risk list, when submitting an IPOR. At the discretion of the Technology Agency, specific project documents may be required to be submitted with the IPOR.

Appendix H: Definition of Terms

Term	Recommended Working Definition
California Project Management Methodology (CA- PMM)	The CA-PMM is the standard IT project management methodology adopted by the State of California. The CA-PMM is constructed using the Project Management Institute's
Completed	Joined the project before development.
	Worked on a project through initial implementation.
COTS Installation	The initial installation of a commercial-off-the-shelf (COTS) package, with or without package supported customization.
Custom Development	The initial development of a custom designed software application.
Custom Update / Upgrade	The updating or upgrading of a custom designed and developed software application. New functionality should be considered Custom Development rather than an update or upgrade.
Data Center / Network Operations Center	The initial installation or subsequent upgrading of data center or network operation operations center hardware items such as a UPS, generator and monitoring center.
Distributed / Enterprise Server	Multiple servers deployed in a distributed fashion in order to locate computing resources closer to de-centralized user base or one or more enterprise servers located centrally at a data center facility.
Enterprise Architecture	A coherent collection of standards, policies and principles that guide the selection, acquisition, implementation, integration and management of IT hardware and software resources.
Hardware	Any physical device used to capture, process, transmit and / or store data.
Infrastructure (Software)	With regard to computer software, the installation, implementation or upgrading of a third party application integration utility such as transaction processing monitor or database management system.
Infrastructure Install / Upgrade	The initial installation or post installation upgrading of IT infrastructure items such as network cabling, network equipment, data center facility hardware (UPS, Generator) or network operations monitoring equipment.

Term	Recommended Working Definition
Initial Implementation	First production use.
IV&V	Independent Verification and Validation.
Key Staff	To include staff in leadership roles (Team Leads) and staff bearing significant technical responsibility (DBA, System Architect) that may not be team leads.
Layered Product	A third-party software application utility used to control and / or support the use of a computing platform or software application (Backup software, monitoring utilities)
Like Project	A project in the same size category, similar degree of complexity, and similar technology as the subject project.
Local Area Network / Cabling	Local Area Network (LAN) communication equipment and / or cabling used to support a single location such as a County Office.
Local desktop / Server	One or more desktop PC's or server devices that are located and operated at a single location such as a County Office.
Metropolitan / Wide Area Network	Metropolitan and / or Wide Area Network (MAN / WAN) communication equipment and circuits.
Middleware	A third-party application integration utility used as part of an overall software application solution (BEA's Tuxedo Transaction Processing Monitor)
New Install	With regard to computer hardware, the initial installation of any computing device(s) in either a local office (desktop or server room) or a data center setting.
Parametric	Parametric analysis employs equations that describe relationships between cost, schedule, and measurable attributes of systems, hardware, and software.
PIER	Post Implementation Evaluation Report.
Project initiation	Beginning of RFP preparation if applicable; or actual start of work if no formal procurement is planned.
SEI "Taxonomy Based Questionnaire"	The SEI "Taxonomy Based Questionnaire" is an industry standard comprehensive IT project risk questionnaire designed to help organize and study the full breadth of potential software technical risk.
	Visit the following website for additional information: http://www.sei.cmu.edu/sei-home.html
Software	Instructions that direct hardware to perform desired functions.

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Term	Recommended Working Definition
Update / Upgrade	With regard to computer hardware, the updating or upgrading of an existing computing device(s). Note that a "forklift" upgrade of a computing device should be classified as a New Install.